

[illegible] OF SIGHTINGS

[illegible]

[illegible] Members were impressed (as have been others, including [illegible] personnel) in the lack of sound data in the great majority of [illegible] histories; also, in the lack of speedy follow-up due primarily [illegible] and limited facilities of the ATIC section concerned. Among the case histories of significant sightings discussed in detail were the following:

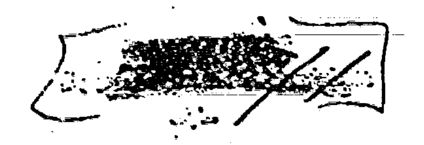
Bellefontaine, Ohio (1 August 1952); Tremonton, Utah (2 July 1952); Great Falls, Montana (15 August 1950); Yaak, Montana (1 September 1950); Washington, D. C. area (19 July 1952); and Haneda A.F.B., Japan (5 August 1952), Port Huron, Michigan (29 July 1952); and Presque Isle, Maine (10 October 1952).

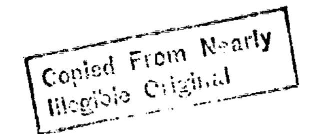
After review and discussion of these cases (and about 15 others, in less detail), the Panel concluded that reasonable explanations could be suggested for most sightings and "by deduction and scientific method it could be induced (given additional data) that other cases might be explained in a similar manner". The Panel pointed out that because of the brevity of some sightings (e.g. 2-3 seconds) and the difficulty of the witnesses [illegible] express themselves clearly (semantics) that conclusive explanations could not be expected for every case reported. Furthermore, it was considered that, normally, it would be a great waste of effort to try to solve most of the sightings, unless such action would benefit a training and educational program (see below). The writings of Charles Fort were referenced to show

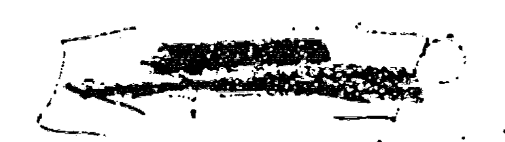
The Panel Members were impressed (as have been others, including ATIC personnel) in the lack of sound data in the great majority of case histories; also, in the lack of speedy follow-up due primarily to the modest size and limited facilities of the ATIC section concerned. Among the case histories of significant sightings discussed in detail were the following:

Bellefontaine, Ohio (1 August 1952); Tremonton, Utah (2 July 1952); Great Falls, Montana (15 August 1950); Yaak, Montana (1 September 1952); Washington, D. C. area (19 July 1952); and Haneda A.F.B., Japan (5 August 1952), Port Huron, Michigan (29 July 1952); and Presque Isle, Maine (10 October 1952).

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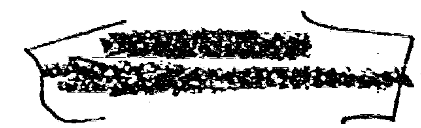


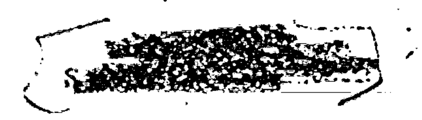


that "strange things in the sky" had been recorded for hundreds of years. It appeared obvious that there was no single explanation for a majority of the things seen. The presence of radar and astronomical specialists on the Panel proved of value at once in their confident recognition of phenomena related to their fields. It was apparent that specialists in such additional fields as psychology, meteorology, aerodynamics, ornithology and military air operations would extend the ability of the Panel to recognize many more categories of little-known phenomena.

OPINIONS OF PANEL

The Panel concluded unanimously that there was no evidence of a direct threat to national security in the objects sighted. Instances of "Foo Fighters" were cited. These were unexplained phenomena sighted by aircraft pilots during World War II in both European and Far East theaters of operation wherein "balls of light" would fly near or with the aircraft and maneuver rapidly. They were believed to be electrostatic (similar to St. Elmo's fire) or electromagnetic phenomena or possibly light reflections from ice crystals in the air, but their exact cause or nature was never defined. Both Robertson and Alvarez had been concerned in the investigation of these phenomena, but David T. Griggs (Professor of Geophysics at the University of California at Los Angeles) is believed to have been the most knowledgeable person on this subject. If the term "flying saucers" had been popular in 1943 - 1945, these objects would





[illegible] as labeled. It was interesting that in at least two cases reviewed that the object sighted was categorized by Robertson and Alvarez as probably "Foo Fighters", to date unexplained but not dangerous; they were not happy thus to dismiss the sightings by calling them names. It was their feeling that these phenomena are not beyond the domain of present knowledge of physical sciences, however.

[illegible]

It was the Panel's opinion that some of the Air Force concern over U.F.O.'s (notwithstanding Air Defense Command anxiety over fast radar tracks) was probably caused by public pressure. The result today is that the Air Force has instituted a fine channel for receiving reports of nearly anything anyone sees in the sky and fails to understand. This has been particularly encouraged in popular articles on this and other subjects, such as space travel and science fiction. The result is the mass receipt of low-grade reports which tend to overload channels of communication with material quite irrelevant to hostile objects that might some day appear. The Panel agreed generally that this mass of poor-quality reports containing little, if any, scientific data was of no value. Quite the opposite, it was possibly dangerous in having a military service foster public concern in "nocturnal meandering lights". The implication being, since the interested agency was military, that these objects were or might be potential direct threats to national security. Accordingly, the need for deemphasization made itself apparent. Comments on a possible educational program are enumerated below.





It was the opinion of Dr. Robertson that the "saucer" problem had been found to be different in nature from the detection and investigation of German V-1 and V-2 guided missiles prior to their operational use in World War II. In this 1943-1944 intelligence operation (CROSSBOW), there was excellent intelligence and by June 1944 there was material evidence of the existence of "hardware" obtained from crashed vehicles in Sweden. This evidence gave the investigating team a basis upon which to operate. The absence of any "hardware" resulting from unexplained U.F.O. sightings lends a "will-o-the-wisp" nature to the ATIC problem. The results of their investigation, to date, strongly indicate that no evidence of hostile act or danger exists. Furthermore, the current reporting system would have little value in the case of detection of enemy attack by conventional aircraft or guided missiles; under such conditions "hardware" would be available almost at once.

POSSIBILITY OF EXTRATERRESTRIAL ORIGIN

It was interesting to note that none of the members of the Panel were loath to accept that this earth might be visited by extraterrestrial intelligent beings of some sort, some day. What they did not find was any evidence that related the objects sighted to space travelers. Mr. Fournet, in his presentation, showed how he had eliminated each of the known and probable causes of sightings leaving him "extra-terrestrial" as the only one remaining in many cases. Fournet's background as an aeronautical engineer and technical intelligence

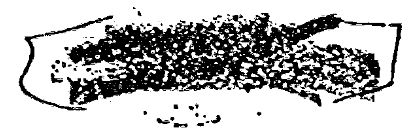




Ruppelt (Project Officer, BLUEBOOK for 18 months) could not be explained. However, the Panel could not accept any of the cases cited by him because they were raw, unevaluated reports. Terrestrial explanations of the sightings were suggested in some cases and in others the time of sighting was so short as to cause [illegible] of visual impressions. It was noted by Dr. Goudsmit and others that extraterrestrial artifacts, if they did exist, are no cause for alarm; rather, they are in the realm of natural phenomena subject to scientific study, just as cosmic rays were at the time of their discovery 20 to 30 years ago. This was an attitude in which Dr. Robertson did not concur, as he felt that such artifacts would be of immediate and great concern not only to the U. S. but to all countries. (Nothing like a common threat to unite peoples!) Dr. Page noted that present astronomical knowledge of the solar system makes the existence of intelligent beings (as we know them) elsewhere than on the earth extremely unlikely, and the concentration of their attention by any controllable means confined to any one continent of the earth quite preposterous.

TREMONTON, UTAH, SIGHTING

This case was considered significant because of the excellent documentary evidence in the form of Kodachrome motion picture films (about 1600 frames). The Panel studied these films, the case history, ATIC's interpretation, and received a briefing by representatives of the USN Photo Interpretation Laboratory on their analysis of the film. This team had expended (at Air Force request) approximately



[redacted]

... man hours of professional and sub-professional time in the preparation of graph plots of individual frames of the film, showing apparent and relative motion of objects and variation in their light intensity. It was the opinion of the P.I.L. representatives that the objects sighted were not birds, balloons or aircraft, were "not reflections because there was no blinking while passing through 60° of arc" and were, therefore, "self-luminous". Plots of motion and variation in light intensity of the objects were displayed. While the Panel Members were impressed by the evident enthusiasm, industry and extent of effort of the P.I.L. team, they could not accept the conclusions reached. Some of the reasons for this were as follows:

a. A semi-spherical object can readily produce a reflection of sunlight without "blinking" through 60° of arc travel.

b. Although no data was available on the "albedo" of birds or polyethylene balloons in bright sunlight, the apparent motions, sizes and brightnesses of the objects were considered strongly to suggest birds, particularly after the Panel viewed a short film showing high reflectivity of seagulls in bright sunlight.

c. P.I.L. description of the objects sighted as "circular, bluish-white" in color would be expected in cases of specular reflections of sunlight from convex surfaces where the brilliance of the reflection would obscure other portions of the object.





d. Objects in the Great Falls case were believed to have probably been aircraft, and the bright lights such reflections.

e. There was no valid reason for the attempt to relate the objects in the Tremonton sighting to those in the Great Falls sighting. This may have been due to misunderstanding in their directive. The objects in the Great Falls sighting are strongly suspected of being reflections of aircraft known to have been in the area.

f. The intensity change in the Tremonton lights was too great for acceptance of the P.I.L. hypothesis that the apparent motion and changing intensity of the lights indicated extremely high speed in small orbital paths.

g. Apparent lack of guidance of investigators by those familiar with U.F.O. reports and explanations.

h. Analysis of light intensity of objects made from duplicate rather than original film. The original film was noted to have a much lighter background (affecting relative brightness of object) and the objects appeared much less bright.

i. Method of obtaining data of light intensity appeared faulty because of unsuitability of equipment and questionable assumptions in making averages of readings.

j. No data had been obtained on the sensitivity of Kodachrome film to light of various intensities using the same camera type at the same lens openings.





c. The "[illegible]" [illegible] (which was then only part of [illegible] film) was not removed from the piece of the "single frame photo" at the end of the film.

d. Panel believed strongly that the data available on this sighting was sufficient for positive identification of further data obtained by photographing polyethylene "pillow" balloons released near the site under similar weather conditions, checking bird flight and reflection characteristics with competent ornithologists and calculating apparent "[illegible]" of objects from their apparent [illegible]. It was considered that the results of such tests would probably lead to creditable explanations of value in an educational or training program. However, the Panel noted that the cost in technical manpower effort required to follow up and explain every one of the thousand or more reports received through channels each year (1,900 in 1952) could not be justified. It was felt that there will always be sightings, for which complete data is lacking, that can only be explained with disproportionate effort and with a long time delay, if at all. The long delay in explaining sightings tends to [illegible] intelligence value. [illegible] training program should have as a major purpose the elimination of the popular feeling that every sighting, no matter how poor the data, must be explained in detail. [illegible] which should be directed to the requirement among scientists that [illegible] must be completely and convincingly documented. In other words, the burden of proof is on the sighter, [illegible] explanation.





[illegible]

... Panel Members were in agreement with O/SI opinion that, although evidence of any direct threat from these sightings was wholly lacking, related dangers might well exist resulting from:

a. Misidentification of actual enemy artifacts by defense personnel.

b. Overloading of emergency reporting channels with "false" information ("noise to signal ratio" analogy—Berkner).

c. Subjectivity of public to mass hysteria and greater vulnerability to possible enemy psychological warfare.

Although not the concern of CIA, the first two of these problems may seriously affect the Air Defense intelligence system, and should be studied by experts, possibly under ADC. If U.F.O.'s become discredited in a reaction to the "flying saucer" scare, or if reporting channels are saturated with false and poorly documented reports, our capability of detecting hostile activity will be reduced. Dr. Page noted that more competent screening or filtering of reported sightings at or near the source is required, and that this can best be accomplished by an educational program.

[illegible] LOCATIONS OF UNEXPLAINED SIGHTINGS

The map prepared by ATIC showing geographic locations of officially reported unexplained sightings (1952 only) was examined by the Panel. This map showed clusters in certain strategic areas such as Los Alamos. This might be explained on the basis of 24-hour watchful guard and





[illegible] security areas were such locations. On the other hand, there had been no sightings in the vicinity of sensitive related AE establishments while there were considerably multiple cases of unexplained sightings in non-strategic areas. Furthermore, there appeared to be no logical relationship to population centers. The Panel could find no ready explanation for these clusters. It was noted, however, that if terrestrial artifacts were to be observed it would be likely that they would be seen first near foreign areas rather than central U. S.

INSTRUMENTATION [illegible]

The Panel was of the opinion that the present ATIC program to place 100 inexpensive 35 mm. stereo cameras in the hands of various airport control tower operators would probably produce little valuable data related to U.F.O.'s. However, it was recognized that such action would tend to allay public concern in the subject until an educational program had taken effect. It was believed that procurement of these cameras was partly the result of public pressure in July 1952. With the poor results of the year-long Project TWINKLE program of 24-hour instrumentation watch (two frames of film showing nothing distinguishable), a widespread program of sky-watching would not be expected to yield much direct data of value.

There was considerable discussion of a possible "sky patrol" by amateur astronomers (Hynek) and by wide-angle cameras (Page). Dr. Page and Dr. Robertson pointed out that at present a considerable fraction





[illegible] has been for many years under surveillance [illegible] night in several meteor and aurora observing programs or [illegible] programs of the various locations listed below. Although the attention of these astronomers is largely directed toward identified rather than unidentified objects, no case of any [illegible] unidentified object is known to Dr. Fogo or Dr. Hynek. Such [illegible] would most certainly be reported if found on patrol plates.

[illegible] was cited where an astronomer refused to interrupt his [illegible] in order to photograph an alleged sighting in a different part of the sky. This led Dr. Hynek to say that, if a program of [illegible] could be an adjunct of planned astronomical programs, little [illegible] would be involved and that the trained astronomical personnel [illegible] photograph a sighting of an unidentified object.

The location of some of these programs and their directors are [illegible] to be:

a. Harvard University, Cambridge and [illegible] Mexico (meteor patrol)--Whipple.

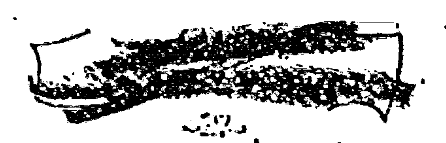
b. Yerkes Observatory, University of Chicago and Fort Davis, Texas (several programs)--Meinel (aurorae), Kuiper (asteroids), Morgan (wide angle camera).

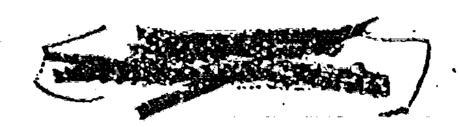
c. University of Alaska, Fairbanks (aurorae)--Elvey

d. Dominion Observatory, Ottawa (meteors)--Millman

e. Palomar Observatory, California (sky map)--Minkowski

f. Lick Observatory, California (sky map)--Shane

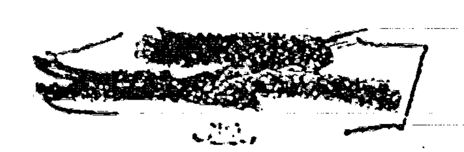


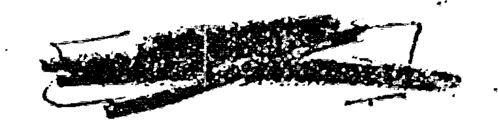


It was agreed by the Panel that no government-sponsored program of optical satellite-like sky patrol is worthwhile at the present time, and that the encouragement of amateur astronomers to undertake such a program might have the adverse effect of over-emphasizing "flying saucer" stories in the public mind. However, the issue of radar 'scope cameras for recording peculiar radar echoes would serve several purposes, including the better understanding of radar interference as well as identification of U.F.O.'s.

RADAR PROBLEM OF SIGNAL IDENTIFICATION

This characteristic problem of radar operation wherein the pulse signal (of approximately the same frequency) from station A may be picked up on the screen of station B and show as a high-speed track or series of dots was recognized to have probably caused a number of U.F.O. reports. This problem was underlined by information received indicating ADC concern in solving this problem of signal identification before service use of very high-speed aircraft or guided missiles (1955-1956). [One Panel member] [Dr. Berkner] believed that one answer to this problem was the use of a "doppler filter" in the receiving circuit. [Another] [Dr. Alvarez] suggested that the problem might be better solved by the use of a "controlled jitter" wherein the operator receiving "very fast tracks" (on the order of 1000- 10,000 m.p.h.) would operate a circuit which would alter slightly his station's pulse frequency rate. If the signal received on the screen had been caused by mutual interference with another station, the track would now show itself at a different distance





and the value of the camera, if it still appeared at all. Dr. Alvarez felt that a technical solution was simpler and would cost much less than [illegible].

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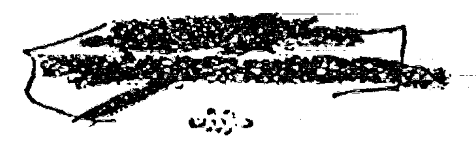
Two radiation cases were considered: one at Palomar Mountain, California, in October 1949, when cosmic ray counters went "off scale for a few seconds" apparently while a "V" of flying objects was observed visually; and two, a series of observations by the "Los Alamos Bird Watchers Association" from August 1950 to January 1951, when cosmic ray coincidence counters behaved queerly. Circuit diagrams and records were available for the latter, and Dr. Alvarez was able quickly to point out that the recorded data were undoubtedly due to instrumental effects that would have been recognized as such by more experienced observers.

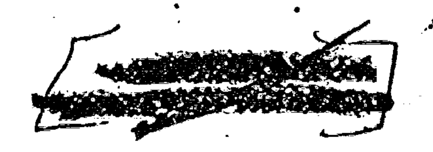
The implication that radioactive effects were correlated with unidentified flying objects in these two cases was, therefore, rejected by the Panel.

EDUCATIONAL PROGRAM

The Panel's concept of a broad educational program integrating efforts of all concerned agencies was that it should have two major aims: training and "debunking".

The training aim would result in proper recognition of unusually illuminated objects (e.g., balloons, aircraft reflections) as well as natural phenomena (meteors, fireballs, mirages, noctilucent clouds). Both visual and radar recognition are concerned. There would be many

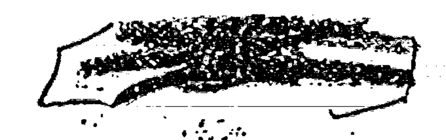


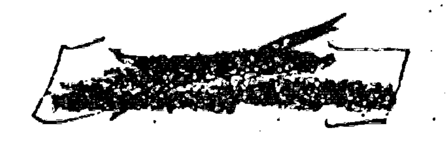


results in such situation from enlisted personnel to command and research personnel. Relative emphasis and degree of explanation of different programs would correspond to the categories of duty (e.g., radar operators; pilots; control tower operators; Ground Observer Corps personnel; and officers and enlisted men in other categories.) This training should result in a marked reduction in reports caused by misidentification and resultant confusion.

The "debunking" aim would result in reduction in public interest in "flying saucers" which today evokes a strong psychological reaction. This education could be accomplished by mass media such as television, motion pictures, and popular articles. Basis of such education would be actual case histories which had been puzzling at first but later explained. As in the case of conjuring tricks, there is much less stimulation if the "secret" is known. Such a program should tend to reduce the current gullibility of the public and consequently their susceptibility to clever hostile propaganda. The Panel noted that the general absence of Russian propaganda based on a subject with so many obvious possibilities for exploitation might indicate a possible Russian official policy.

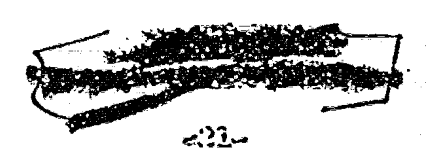
Members of the Panel had various suggestions related to the planning of such an educational program. It was felt strongly that psychologists familiar with mass psychology should advise on the nature and extent of the program. In this connection, Dr. Hadley Cantril (Princeton University) was suggested. Cantril authored "Invasion from





Mars, (a study in the psychology of panic, written about the famous Orson Welles radio broadcast in 1938) and has since performed advanced laboratory studies in the field of perception. The names of Don Marquis (University of Michigan) and Leo Rosten were mentioned as possibly suitable as consultant psychologists. Also, someone familiar with mass communication techniques, perhaps an advertising expert, would be helpful. Arthur Godfrey was mentioned as possibly a valuable channel of communication reaching a mass audience of certain levels. Dr. Berkner suggested the U. S. Navy (ONR) Special Devices Center, Sands Point, L. I., as a potentially valuable organization to assist in such an educational program. The teaching techniques used by this agency for aircraft identification during the past war was cited as an example of a similar educational task. The Jam Handy Co. which made World War II training films (motion picture and slide strips) was also suggested, as well as Walt Disney, Inc. animated cartoons. Dr. Hynek suggested that the amateur astronomers in the U. S. might be a potential source of enthusiastic talent "to spread the gospel". It was believed that business clubs, high schools, colleges, and television stations would all be pleased to cooperate in the showing of documentary type motion pictures if prepared in an interesting manner. The use of true cases showing first the "mystery" and then the "explanation" would be forceful.

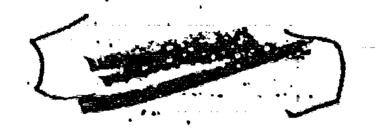
To plan and execute such a program, the Panel believed was no mean task. The current investigatory group at ATIC would, of necessity, have to be closely integrated for support with respect to not only the





[illegible]

[illegible] support, the educational program of [illegible] above might be required for a minimum of [illegible] At the end of [illegible], the [illegible] Cooperation from other military services and agencies [illegible] would be a [illegible] In investigating significant cases (such as the [illegible] might be [illegible]





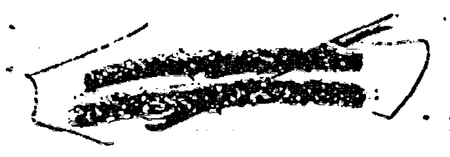
[illegible] photographing of "[illegible] lights" at different distances [illegible] weather conditions at the site.

[illegible] of one or two good physicists and a [illegible] [illegible] training would be necessary in addition. The Panel [illegible] that ATIC's efforts, temporarily expanded as necessary, could be most useful in implementing any action taken as a result of its recommendations. Experience and records in ATIC would be of value in both the public educational and service training program envisaged. Dr. Goudsmit at least, [illegible] was of the opinion that after public gullibility lessened and the service organizations, such as ADC, had been trained to sift out the more readily explained spurious sightings, there would still be a role for a very modest-sized ATIC section to cope with the residuum of items of possible scientific intelligence value. This section should concentrate on energetically following up (perhaps on the advice of qualified Air Force Scientific Advisory Board members) those cases which seemed to indicate the existence of unconventional enemy artifacts. Reports of such artifacts would be expected to come mainly from Western outposts in far closer proximity to the Iron Curtain than Lubbock, Texas!

[illegible]

The Panel took cognizance of the existence of such groups as the "Civilian Flying Saucer Investigators" (Los Angeles) and the "Aerial Phenomena Research Organization (Wisconsin)". It was believed that such organizations should be watched because of their potentially





R. G. DURANT III



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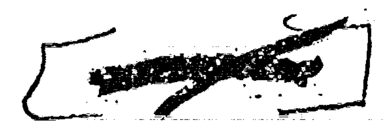
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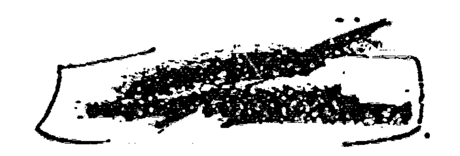
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[illegible]	[illegible]	[illegible] problems
[illegible]	[illegible] of Research [illegible] University	Astronomy, [illegible] physics
[illegible]	[illegible] State University	Astronomy
[illegible]	Arthur D. Little, Inc.	Rockets, guided missiles
[illegible] N. [illegible]	Commanding General, [illegible]	Scientific and technical intelligence
[illegible]	Assistant Director, [illegible] CIA	Scientific and technical intelligence
Mr. Ralph [illegible] Clark	Deputy Assistant [illegible], O/SI, CIA	Scientific and technical intelligence

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[illegible]	[illegible] Photo Interpretation [illegible]	Photo Interpretation [illegible]
[illegible]	[illegible] Photo Interpretation [illegible]	Photo Interpretation

TAB B



[illegible] ON

UNIDENTIFIED FLYING OBJECTS

14 - 17 January 1953

[illegible]

1. [illegible]-two case histories of sightings 1951 - 1952 (selected by [illegible]).

2. [illegible] and Progress Reports of Project GRUDGE and Project [illegible] (code name for ATIC study of subject).

3. Progress Reports of Project STORK [code name for Battelle Memorial I[illegible]] [illegible] contract with supporting ATIC).

4. Summary Report of Sightings at Holloman Air Force Base, New Mexico.

5. [illegible] of USAF Research Center, Cambridge, Mass., Investigation of [illegible] as Fireball Phenomena (Project TWINKLE).

6. Outline of Investigation of U.F.O.'s Proposed by Holloman Air Force Base (Project [illegible]).

7. [illegible] on Various [illegible] of Sightings at Tremonton, Utah, 2 July 1952 [illegible] Great Falls, Montana, August 1950.

8. Summary Report of [illegible] selected cases of sightings of various categories (Formations, Circling Lights, Hovering, etc.).

9. Draft of manual "How to Make a FLYOBRPT", prepared at ATIC.

10. Chart Showing Plot of Geographic Location of Unexplained Sightings in the United States during 1952.

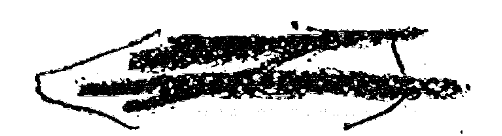
11. Chart Showing Balloon Launching Areas in the United States.

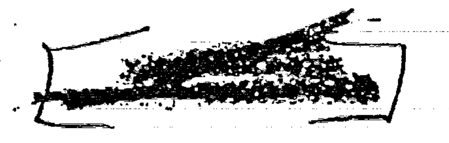
12. Chart Showing Selected Typical Balloon Flight Paths and Relation to Reported Sightings.

13. Chart Showing Frequency of Reports of Sightings, 1948 - 1952.

14. Chart Showing Categories of Explanations of Sightings.

15. Kodachrome Transparencies of Polyethylene Film Balloons in Bright [illegible] Showing High [illegible].





TAB 1

16. [illegible] picture of zeppelin in flight [illegible] showing high reflectivity.

17. Intelligence Reports Relating to U.S.S.R. Interest in U. S. Sightings.

18. Samples of Official USAF Reporting Forms and Copies of Pertinent Air Force, Army and Navy Orders Relating to subject.

19. Sample Polyethylene "Pillow" Balloon (24 inches square).

20. "Variations in Radar Coverage", JANP 101 (Manual illustrating unusual operating characteristics of Service radar).

21. Miscellaneous official letters and foreign intelligence reports dealing with subject.

22. Copies of popular published works dealing with subject (articles in periodicals, newspaper clippings and books).

